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|---|--------|---|---------|------------------|
| - | 9 | (horizontal adj drilling) and 405/184.ccls. | USPAT; | 2002/01/14 11:55 |
| - | 1100 | pipe adj handling | DERWENT | 2002/01/14 11:55 |
| - | 28 | pipe adj handling adj assembly | USPAT; | 2002/01/14 11:56 |
| - | 689859 | sensor | DERWENT | 2002/01/14 11:56 |
| - | 4 | 405/184.ccls. and (pipe adj handling) | USPAT; | 2002/01/14 11:59 |
| - | 23 | sensor and 405/184.ccls. | DERWENT | 2002/01/14 11:59 |
| - | 452 | 175/45.ccls. | USPAT; | 2002/01/15 12:46 |
| - | 651 | 175/61.ccls. | DERWENT | 2002/01/15 12:46 |
| - | 328 | 175/45.ccls. not (175/45.ccls. and 175/61.ccls.) | USPAT; | 2002/01/15 12:46 |
| - | 527 | 175/61.ccls. not (175/45.ccls. and 175/61.ccls.) | DERWENT | 2002/01/15 12:47 |
| - | 124 | 175/45.ccls. and 175/61.ccls. | USPAT; | 2002/01/15 12:52 |
| - | 577 | tracking adj sensor | DERWENT | 2002/01/15 12:52 |
| - | 0 | 175/45.ccls. and (tracking adj sensor) | USPAT; | 2002/01/15 12:52 |
| - | 0 | 175/61.ccls. and (tracking adj sensor) | DERWENT | 2002/01/15 12:52 |
| - | 690116 | sensor | USPAT; | 2002/01/15 12:53 |
| - | 140 | (175/45.ccls. not (175/45.ccls. and 175/61.ccls.)) and sensor | DERWENT | 2002/01/15 12:53 |
| - | 66 | (175/61.ccls. not (175/45.ccls. and 175/61.ccls.)) and sensor | USPAT; | 2002/01/15 12:53 |
| - | 66 | (175/45.ccls. and 175/61.ccls.) and sensor | DERWENT | 2002/01/15 12:54 |
| - | 132 | 175/61.ccls. and sensor | USPAT; | 2002/01/15 12:57 |
| - | 71120 | guidance | DERWENT | 2002/01/15 12:57 |
| - | 68 | 175/45.ccls. and guidance | USPAT; | 2002/01/15 12:57 |
| - | 87 | 175/61.ccls. and guidance | DERWENT | 2002/01/15 12:57 |
| - | 52486 | pressure adj sensor | USPAT; | 2002/01/15 12:58 |
| - | 24 | 175/45.ccls. and (pressure adj sensor) | DERWENT | 2002/01/15 12:58 |
| - | 96352 | tracking | USPAT; | 2002/01/15 12:58 |
| - | 40 | 175/45.ccls. and tracking | DERWENT | 2002/01/15 12:59 |
| - | 11884 | payne | USPAT; | 2002/01/15 12:59 |
| - | 0 | 175/61.ccls. and payne | DERWENT | 2002/01/15 12:59 |
| - | 2 | 175/45.ccls. and payne | USPAT; | 2002/01/15 12:59 |
| - | 44 | 175/61.ccls. and tracking | DERWENT | 2002/01/15 13:09 |
| - | 14 | 175/61.ccls. and (pressure adj sensor) | USPAT; | 2002/01/15 13:15 |
| - | 0 | de029913401 | DERWENT | 2002/01/16 09:52 |
| - | 0 | 210/266.ccls, | USPAT; | 2002/01/16 09:52 |
| - | 789 | 210/266.ccls. | DERWENT | 2002/01/16 09:53 |
| - | 201 | back adj flow adj valve | USPAT; | 2002/01/16 09:55 |
| - | 0 | 210/266.ccls. and (back adj flow adj valve) | DERWENT | 2002/01/16 09:55 |

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|---|--------|--|---------|------------------|
| - | 2173 | flush adj valve | USPAT; | 2002/01/16 09:56 |
| - | 300 | flush adj port | DERWENT | 2002/01/16 09:56 |
| - | 0 | 210/266.ccls. and (flush adj valve) | USPAT; | 2002/01/16 09:56 |
| - | 1 | 210/266.ccls. and (flush adj port) | DERWENT | 2002/01/16 09:58 |
| - | 806 | storm adj water | USPAT; | 2002/01/16 09:58 |
| - | 16912 | filter adj media | DERWENT | 2002/01/16 09:58 |
| - | 49 | (storm adj water) and (filter adj media) | USPAT; | 2002/01/16 10:03 |
| - | 625683 | outlet | DERWENT | 2002/01/16 10:04 |
| - | 30 | ((storm adj water) and (filter adj media)) | USPAT; | 2002/01/16 11:55 |
| - | 3091 | and outlet | DERWENT | 2002/01/16 12:16 |
| - | 0 | 405/36-62.ccls. | USPAT; | 2002/01/16 11:56 |
| - | 0 | (outlet adj above adj inlet) and | DERWENT | 2002/01/16 12:21 |
| - | 789 | 405/36-62.ccls. | USPAT; | 2002/01/16 11:57 |
| - | 0 | 210/266.ccls. | DERWENT | 2002/01/16 11:58 |
| - | 87 | (outlet adj above adj inlet) and (upflow adj | USPAT; | 2002/01/16 11:58 |
| - | 0 | filter) | DERWENT | 2002/01/16 11:59 |
| - | 11666 | storm adjwater | USPAT; | 2002/01/16 11:59 |
| - | 806 | storm adj water | DERWENT | 2002/01/16 12:04 |
| - | 5 | (upflow adj filter) and (storm adj water) | USPAT; | 2002/01/16 12:16 |
| - | 64 | outlet adj above adj inlet | DERWENT | 2002/01/16 12:17 |
| - | 590 | 405/36.ccls. | USPAT; | 2002/01/16 12:17 |
| - | 745277 | filter | DERWENT | 2002/01/16 12:18 |
| - | 16912 | filter adj media | USPAT; | 2002/01/16 12:27 |
| - | 11 | 405/36.ccls. and (filter adj media) | DERWENT | 2002/01/16 12:42 |
| - | 6 | 210/266.ccls. and (storm adj water) | USPAT; | 2002/01/16 12:42 |
| - | 61 | 405/41.ccls. | DERWENT | 2002/01/17 09:30 |
| - | 274 | (storm adj water) and filter | USPAT; | 2002/01/17 09:37 |
| - | 18 | (storm adj water) adj filter | DERWENT | 2002/01/17 09:37 |
| - | 430 | 404/25.ccls. | USPAT; | 2002/01/17 09:37 |
| - | 745277 | filter | DERWENT | 2002/01/17 09:39 |
| - | 61 | 405/41.ccls. | USPAT; | 2002/01/17 09:39 |
| - | 8 | filter and 405/41.ccls. | DERWENT | 2002/01/17 09:42 |
| - | 264 | 404/4.ccls. | USPAT; | 2002/01/18 11:48 |
| - | 37 | filter and 404/4.ccls. | DERWENT | 2002/01/18 11:48 |
| - | 2 | ("6106707").PN. | USPAT; | |
| - | 0 | 14/69.9.ccls. | DERWENT | |
| - | 413 | 14/69.5.ccls. | USPAT; | |
| - | | | DERWENT | |

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|---|--------|--|---------|------------------|
| - | 29040 | pneumatic adj cylinder | USPAT; | 2002/01/18 11:48 |
| - | 5 | 14/69.5.ccls. and (pneumatic adj cylinder) | DERWENT | |
| - | 4 | ((("5322391") or ("5350254"))).PN. | USPAT; | 2002/01/22 12:44 |
| - | 1 | drill adj string adj lubrication | DERWENT | |
| - | 4 | ((("4834193") or ("4907658"))).PN. | USPAT; | 2002/01/22 13:39 |
| - | 2 | ("4837158").PN. | DERWENT | |
| - | 2 | ("4837518").PN. | USPAT; | 2002/01/22 13:47 |
| - | 36618 | engine adj speed | DERWENT | |
| - | 452 | 175/45.ccls. | USPAT; | 2002/01/22 13:51 |
| - | 652 | 175/61.ccls. | DERWENT | |
| - | 0 | (engine adj speed) and 175/45.ccls. | USPAT; | 2002/01/22 13:52 |
| - | 0 | (engine adj speed) and 175/61.ccls. | DERWENT | |
| - | 29477 | motor adj speed | USPAT; | 2002/01/22 13:56 |
| - | 11 | 175/45.ccls. and (motor adj speed) | DERWENT | |
| - | 12 | 175/61.ccls. and (motor adj speed) | USPAT; | 2002/01/22 13:57 |
| - | 2 | ("4710708").PN. | DERWENT | |
| - | 2423 | mwd | USPAT; | 2002/01/22 13:58 |
| - | 54 | 175/41.ccls. | DERWENT | |
| - | 652 | 175/61.ccls. | USPAT; | 2002/01/22 13:58 |
| - | 452 | 175/45.ccls. | DERWENT | |
| - | 75 | mwd and 175/45.ccls. | USPAT; | 2002/01/22 13:58 |
| - | 74 | mwd and 175/61.ccls. | DERWENT | |
| - | 2 | ("5048793").PN. | USPAT; | 2002/01/22 13:57 |
| - | 74 | sesnor | DERWENT | |
| - | 0 | ((("5048793").PN.) and sesnor | USPAT; | 2002/01/23 09:32 |
| - | 369597 | receiver | DERWENT | |
| - | 0 | ((("5048793").PN.) and receiver | USPAT; | 2002/01/23 09:32 |
| - | 8 | 5048793.URPN. | DERWENT | |
| - | 149 | pipe adj gripper | USPAT; | 2002/01/23 09:32 |
| - | 1100 | pipe adj handling | DERWENT | |
| - | 0 | 175/61.ccls. and (pipe adj gripper) | USPAT; | 2002/01/23 09:32 |
| - | 0 | 175/61.ccls. and (pipe adj handling) | DERWENT | |
| - | 0 | 175/45.ccls. and (pipe adj handling) | USPAT; | 2002/01/23 09:32 |
| - | 0 | 175/61.ccls. and (pipe adj handling) | DERWENT | |
| - | 691575 | sensor | USPAT; | 2002/01/23 09:32 |
| - | 0 | ((("5048793").PN.) and sensor | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:16 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:28 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:17 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:17 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:17 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:26 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:28 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:29 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:29 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:29 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:30 |
| - | | | DERWENT | |
| - | | | USPAT; | 2002/01/23 10:30 |
| - | | | DERWENT | |

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|---|---------|--|---------|------------------|
| - | 77 | (pipe adj handling) and sensor | USPAT; | 2002/01/23 10:45 |
| - | 841 | horizontal adj drilling | DERWENT | 2002/01/23 10:46 |
| - | 1 | ((pipe adj handling) and sensor) and | USPAT; | 2002/01/23 12:36 |
| - | 4 | (horizontal adj drilling) | DERWENT | 2002/01/23 12:58 |
| - | 4 | ((("4844516") or ("5332049"))).PN. | USPAT; | 2002/01/23 12:59 |
| - | 4 | ((("5497707") or ("5601025"))).PN. | DERWENT | 2002/01/23 12:59 |
| - | 126 | pipe adj jack | USPAT; | 2002/01/23 12:59 |
| - | 52574 | pressure adj sensor | DERWENT | 2002/01/23 13:00 |
| - | 1 | (pipe adj jack) and (pressure adj sensor) | USPAT; | 2002/01/23 13:01 |
| - | 12549 | drill adj string | DERWENT | 2002/01/23 13:02 |
| - | 4777 | break adj out | USPAT; | 2002/01/23 13:02 |
| - | 228 | (drill adj string) and (break adj out) | DERWENT | 2002/01/23 13:02 |
| - | 691575 | sensor | USPAT; | 2002/01/23 13:03 |
| - | 31 | ((drill adj string) and (break adj out)) and | DERWENT | 2002/01/23 13:08 |
| - | 2 | sensor | USPAT; | 2002/01/23 13:37 |
| - | 478 | ("5048793").PN. | DERWENT | 2002/01/23 13:38 |
| - | 74 | 175/40.ccls. | USPAT; | 2002/01/23 13:38 |
| - | 691575 | sesnor | DERWENT | 2002/01/23 13:38 |
| - | 231 | sensor | USPAT; | 2002/01/23 13:38 |
| - | 1275260 | sensor and 175/40.ccls. | DERWENT | 2002/01/23 13:41 |
| - | 5596 | assembly | USPAT; | 2002/01/23 13:42 |
| - | 5 | (drill adj string) and assembly | DERWENT | 2002/01/23 13:42 |
| - | 841 | 175/40.ccls. and (((drill adj string) and | USPAT; | 2002/01/23 13:46 |
| - | 202 | (break adj out)) and sensor) | DERWENT | 2002/01/23 13:46 |
| - | 61 | horizontal adj drilling | USPAT; | 2002/01/23 13:47 |
| - | 102 | ((drill adj string) and assembly) and | DERWENT | 2002/01/24 10:00 |
| - | 691575 | (horizontal adj drilling) and sensor | USPAT; | 2002/01/24 10:01 |
| - | 46 | 175/24.ccls. | DERWENT | 2002/01/24 10:01 |
| - | 478 | sensor | USPAT; | 2002/01/24 10:01 |
| - | 411 | 175/40.ccls. and sensor | DERWENT | 2002/01/24 10:02 |
| - | 231 | 175/85.ccls. | USPAT; | 2002/01/24 10:02 |
| - | 23 | 175/40.ccls. and sensor | DERWENT | 2002/01/24 10:02 |
| - | 841 | 175/85.ccls. and sensor | USPAT; | 2002/01/24 10:28 |
| - | 10 | horizontal adj drilling | DERWENT | 2002/01/24 10:29 |
| - | 6 | (175/40.ccls. and sensor) and (horizontal | USPAT; | 2002/01/24 10:49 |
| - | 2 | adj drilling) | DERWENT | 2002/01/24 10:51 |
| - | 31638 | drill adj rod adj loader | USPAT; | 2002/01/24 10:54 |
| - | | drill adj string adj loader | DERWENT | 2002/01/24 10:54 |
| - | | loader | USPAT; | 2002/01/24 10:54 |
| - | | | DERWENT | |

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|---|--------|---|-------------------|------------------|
| - | 10 | (horizontal adj drilling) and loader | USPAT; DERWENT | 2002/01/24 10:56 |
| - | 5 | sensor and ((horizontal adj drilling) and loader) | USPAT; DERWENT | 2002/01/24 12:13 |
| - | 9752 | drilling adj mud | USPAT; DERWENT | 2002/01/24 12:14 |
| - | 691575 | sensor | USPAT; DERWENT | 2002/01/24 12:14 |
| - | 1129 | (drilling adj mud) and sensor | USPAT; DERWENT | 2002/01/24 12:14 |
| - | 478 | 175/40.ccls. | USPAT; DERWENT | 2002/01/24 12:14 |
| - | 102 | ((drilling adj mud) and sensor) and 175/40.ccls. | USPAT; DERWENT | 2002/01/24 12:15 |